

Date: Monday, 01/06/2009 2:33:16 PM
 User: Melanie Fauteux

Process Sheet

Customer : CC-DAR01 Dart Aerospace Ltd.	Drawing Name : D350-591-121
Job Number : 48302	
Estimate Number : 10804	
P.O. Number :	Part Number : D350591121
This Issue : 01/06/2009 S.O. No. :	Drawing Number : R09-045
Prsht Rev. : NC	Project Number :
First Issue : / / Type : LARGE FAB ASSY	Drawing Revision :
Previous Run : 00015	Material :
Written By : <i>0906-01</i>	Due Date : 08/06/2009 Qty: 1 Um: Each
Checked & Approved By : <i>MF 09-06-01</i>	
Comment :	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D350591121	Heli-Access-Step, LH
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
 Heli-Access-Step, LH
 Original B43114 @ CHG004



2.0	QC5	INSPECT WORK TO CURRENT STEP
-----	-----	------------------------------



Comment: INSPECT WORK TO CURRENT STEP



Step is conforming here in house upon a trail fit and assembly in the ENG lab (see attached e-mail on return).

Step has minor scratches on the interior walls on the step leg ass'y, and will need to be re-powdercoated, along with the D2230-1 & -3 lugs.

-New hardware will also be needed.

3.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
-----	-----------------	----------------------------



Comment: HAND FINISHING RESOURCE #1

-Sand with 320 grit paper and wash the entire step for re-powdercoating, along with the D2230-1 & -3 mounting lugs that are on the step



Keep the parts identified for traceability. See below for B#'s:

D2230-1: B43444

D2230-3 B42223

BR 09-07-01

Date: Monday, 01/06/2009 2:33:16 PM
User: Melanie Fauteux

Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: D350-591-121

Job Number: 48302

Part Number: D350591121

Job Number:



Seq. #:

Machine Or Operation:

Description :

4.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Touch up Alodine

BR 04-08-01

5.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

11:30AM

OVEN TEMPERATURE:

320°F

FINISH TIME:

12:00PM

AL 09-07-01 (X)

6.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk per Dwg D2351 and QSI 005 4.4

Batch:

111013

BR 09-07-1 0.

7.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

L.C. 9/07/01 (1)

8.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

HJ for CL 09/07/07

S. 09/07/07

New decals, labels, and paperwork are required with the new batch # @ CHG004

9.0

D22301

Lug



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Packing Kit Qty Part Number Description Batch

****USE ORIGINAL LUG****

1 D2230-1 Mounting Lug B43444

B43444

(K)

SL

9/7/02

Date: Monday, 01/06/2009 2:33:16 PM
User: Melanie Fauteux

Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: D350-591-121

Job Number: 48302

Part Number: D350591121

Job Number:



Seq. #:

Machine Or Operation:

Description :

10.0

D22303

Lug



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

USE ORIGINAL LUG*

1 D2230-3 Mounting Lug B42223

42223

(12)

9/7/2

SP

11.0

D2856400

Abrasion Strip



Comment: Qty.: 0.6000 f(s)/Unit Total: 0.6000 f(s)

Pick:

Packing KitQty Part Number Description Batch

1 D2856-400 7.20" Abrasion Strip

46513

9/7/2

SP

12.0

AN337A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

2 AN3-37A Bolt

M105425

9/7/2

SP

13.0

AN413A

Bolt



Comment: Qty.: 3.0000 Each(s)/Unit Total: 3.0000 Each(s)

AN4-13A

Batch: M111925

9/7/2

SP

14.0

AN960JD10

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

4 AN960JD10 Washer

M111668

9/7/2

SP

15.0

AN960JD416

Washer



Comment: Qty.: 6.0000 Each(s)/Unit Total: 6.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

6 AN960JD416 Washer

M111279

9/7/2

SP

Date: Monday, 01/06/2009 2:33:16 PM
User: Melanie Fauteux

Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: D350-591-121

Job Number: 48302

Part Number: D350591121

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

MS21042L3

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch
2 MS21042L3 Nut (or -3) M111274

9/14/12

510

17.0

MS21042L4

Nut



Comment: Qty.: 3.0000 Each(s)/Unit Total : 3.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch
3 MS21042L4 Nut (or -4) M110507

9/14/12

70

18.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

Ensure to use the original D2230-1 & -3 lugs for re-packaging, and they are correctly identified with the correct part and batch #

5062102 (CH)

19.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Ensure to use the original D2230-1 & -3 lugs for re-packaging

✓ 10/9/12

Identify and pack for shipping as per PPP D350-591-121

Location:

PPP Rev: D

10/9/12

D

20.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/10/07

Job Completion



MF 09-10-07

Date: Friday, 31/10/2008 10:01:29 AM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : SHORT STEP ASSEMBLY
Job Number : 43114	
Estimate Number : 11672	
P.O. Number :	Part Number : D350591121
This Issue : 31/10/2008 S.O. No. :	Drawing Number : D2351 UNDER REVIEW
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : LARGE FAB ASSY	Drawing Revision : E
Previous Run : 38908	Material :
Written By :	Due Date : 15/11/2008
Checked & Approved By : JUD 08.10.31	Qty: 5 Um: Each
Comment : Est Rev:E 02.10.21 Re-format; Incorporated D2351-041 IPP K	
J/R/F	
est rev. F 06.02.23 added grinding EC	

REFERENCE ONLY

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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for JUD 08/11/25



Comment: DOCUMENT CONTROL

Photocopy bluefile and type labels as per PPP D350-591-121CHG004

15 02/01/19

2.0	D2244116	Step Extrusion
-----	----------	----------------



Comment: Qty.: 0.5000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
0.5	D2244-116	Extrusion	B338023 (f)

B33733 (i)

SAD 09-01-05

3.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
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Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2244-116 extrusion to 55.32" long as per Dwg D2351 using cutting table setup DT8185-G

2-Drill extrusion per Dwg D2351 using Jig DT8230 for rivets.

3-Deburr

SAD 09-01-05 (4)

4.0	BENDING	BENDING MACHINE - SKIDTUBES
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Comment: BENDING MACHINE

Bend per Dwg D2351 using Bend Program D23561dD FT011

MB

Date: Friday, 31/10/2008 10:01:29 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 43114

Part Number: D350591121

Job Number:



Seq. #: Machine Or Operation: Description :

18.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

BE 09-01-13 (5x)

19.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 09/01/13 (x5) (LH)

20.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Touch up Alodine

FL 09/01/13 (5) (LH)

21.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

3:40

OVEN TEMPERATURE:

320°

FINISH TIME:

4:10

FL 08/01/14 (5) (LH)

22.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk per Dwg D2351 and QSI 005 4.4

Batch:

M110454

Q.M 09.01.15 (LH)

23.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

S 09/01/13 (x5) (LH)

24.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

25.0

D22301

Lug



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Packing Kit Qty Part Number

Description

Batch

43444

FL 09/01/14 (5) (LH)

Date: Friday, 31/10/2008 10:01:30 AM
User: Julie Dawson

Process Sheet

(5)

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY

Job Number: 43114

Part Number: D350591121

Job Number:



Seq. #:

Machine Or Operation:

Description :

1 D2230-1 Mounting Lug

26.0

D22303

Lug



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

1 D2230-3 Mounting Lug

43223

9/01/16 (5)

27.0

D2856400

Abrasion Strip



Comment: Qty.: 0.6000 f(s)/Unit Total : 2.4000 f(s)

Pick:

Packing KitQty Part Number Description Batch

1 D2856-400 7.20" Abrasion Strip

42076

B

28.0

AN337A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

2 AN3-37A

Bolt

M9230

B

29.0

AN413A

Bolt



Comment: Qty.: 3.0000 Each(s)/Unit Total : 12.0000 Each(s)

AN4-13A

Batch: M109285

B

30.0

AN960JD10

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 16.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

4 AN960JD10

Washer

M109061

B

31.0

AN960JD416

Washer



Comment: Qty.: 6.0000 Each(s)/Unit Total : 24.0000 Each(s)

Pick:

Packing KitQty Part Number Description Batch

6 AN960JD416

Washer

M109249

9/01/16 (5)

Work Order ID 48302

July 6, 2009 2:20:29 PM



Page 1

Item ID: D350-591-121

Accept



Setup Start



Revision ID: E

Stop



Item Name: Heli-Access-Step, LH

Start Date: 07/06/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 07/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

muf

Date:

6/7/09

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2351

Rev E

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and type labels as per PPP D350-591-121CHG004

6/7/09

110

0.00



Large Fab

Large Fab

Memo

0.00

Large Fab

1-Cut D2244-116 extrusion to 55.32" long as per Dwg D2351 using cutting table setup DT8185-G
2-Drill extrusion per Dwg D2351 using Jig DT8230 for rivets.
3-Deburr

120

0.00



BENDING MACHINE - SKIDTUBES

CNC Bender 1

Memo

0.00

CNC Delta 100 Bender

Bend as per Dwg D2351-041 using CNC Bender 1 and Folio FT011. Use Bend Program D2351-041.

Work Order ID 48302

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Page 2

Item ID: D350-591-121

Accept



Setup Start



Revision ID: E

Stop



Item Name: Heli-Access-Step, LH

Start Date: 07/06/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 07/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

140

Large Fab

0.00



Large Fab

Memo

0.00

Large Fab

1-Bevel Fwd and Aft end for welding
2-Weld Aft End Bracket per QSI 004 & Dwg D2351 using Welding Jig DT8033
A/RAluminum Rod f
3-Do not Grind Flush

150

QC9- Inspect visual per QSI004- Fusion Welds

0.00



QC

Memo

0.00

Quality Control

Work Order ID 48302

July 6, 2009 2:20:29 PM



Page 3

Item ID: D350-591-121

Accept



Setup Start



Revision ID: E

Stop



Item Name: Heli-Access-Step, LH

Start Date: 07/06/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 07/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

170

Chemical Conversion Coat per QS1005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

180

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

Work Order ID 48302

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Page 4

Item ID: D350-591-121

Accept



Setup Start



Revision ID: E

Stop



Item Name: Heli-Access-Step, LH

Start Date: 07/06/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 07/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

0.00



Large Fab

Large Fab

Memo

0.00

Large Fab

1-Rivet Leg Assembly as per Dwg D2351

200

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

210

0.00



Large Fab

Large Fab

Memo

0.00

Large Fab

1-Weld Fwd End Plate per QSI 004 & Dwg D2351
A/RAluminum Rod

2-Grind end cap flush per dwg D2351

Work Order ID 48302

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Item ID: D350-591-121

Accept



Setup Start



Revision ID: E

Stop



Item Name: Heli-Access-Step, LH

Start Date: 07/06/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 07/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220

QC9- Inspect visual per QSI004- Fusion Welds

0.00



QC

Memo

0.00

Quality Control

230

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

240

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

Work Order ID 48302

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Page 6

Item ID: D350-591-121

Accept



Setup Start



Revision ID: E

Stop



Item Name: Heli-Access-Step, LH

Start Date: 07/06/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 07/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME: _____

OVEN TEMPERATURE: _____

FINISH TIME: _____

260

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

270

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

Work Order ID 48302

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Item ID: D350-591-121

Accept



Setup Start



Revision ID: E

Stop



Item Name: Heli-Access-Step, LH

Start Date: 07/06/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 07/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

280

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

290

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

300

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D350-591-121

Location:

PPP Rev:

D

6/9/09 (1)

Work Order ID 48302

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Item ID: D350-591-121

Accept



Setup Start



Revision ID: E

Stop



Item Name: Heli-Access-Step, LH

Start Date: 07/06/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 07/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

310

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control